Australian Bureau of Statistics

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Summary

Main Features

PREFACE

This publication is the first volume of a series detailing the new Australian Statistical Geography Standard (ASGS). It deals with the ASGS Main Structure (Statistical Area Levels 1 - 4) and the Greater Capital City Statistical Areas.

The ASGS brings all the regions for which the ABS publishes statistics within the one framework and will be used by the ABS for the collection and dissemination of geographically classified statistics from 1 July 2011. It is the framework for understanding and interpreting the geographical context of statistics published by the ABS. The ABS also encourages the use of the ASGS by other organisations to improve the comparability and usefulness of statistics generally.

While there are superficial similarities between the ASGS and the Australian Standard Geographical Classification (ASGC), it is important to recognise that the two are fundamentally different and there are significant differences between their respective regions, both in their geographical extent and their conceptual foundation. As a whole, the ASGS represents a more comprehensive, flexible and consistent way of defining Australia's statistical geography than the ASGC. For further information to assist you to move from the ASGC to the ASGS please refer to the ABS website at https://www.abs.gov.au/geography.

The ASGS will be progressively introduced through the various ABS collections. It will replace the ASGC as the main geographical framework for the 2011 Census of Population and Housing, although data on Statistical Local Areas (SLAs) and those regions aggregated from SLAs will still be available for 2011. All ABS collections should be reporting on ASGS units by 2013.

Future volumes will detail the: Indigenous Structure, Non-ABS Geographies (including Local Government Areas), Urban Centres and Localities/Section of State and Remoteness Areas. The digital boundaries, maps, codes and labels for the regions described in this volume are available free of charge from the Australian Bureau of Statistics (ABS) website at https://www.abs.gov.au/geography.

Any enquires regarding the ASGS, or suggestions for its improvement can be made by emailing geography@abs.gov.au.

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Australian Statistician

ABOUT THIS PUBLICATION

PURPOSE OF THIS PUBLICATION

The purpose of this publication is to outline the conceptual basis of the ASGS Main Structure and the Greater Capital City Statistical Areas (GCCSAs) and their relationships to each other. The digital boundaries, maps, codes and labels for each of these regions are defined and can be obtained from the ABS website free of charge at https://www.abs.gov.au/geography.

This publication is the first in a series of volumes that will detail the various structures and regions of the ASGS. For more detail, please refer to ASGS Related Material and Release Timetable.

PURPOSE OF THE ASGS

The main purpose of the ASGS is for disseminating geographically classified statistics. It provides a common framework of statistical geography which enables the publication of statistics that are comparable and spatially integrated.

When the ASGS is fully implemented within the ABS, statistical units such as households and businesses will be assigned to a Mesh Block. Data collected from these statistical units will then be compiled into ASGS defined geographic regions which, subject to confidentiality restrictions, will be available for publication.

About this Release

The ASGS provides a common framework of statistical geography used by the ABS to enable the publication of statistics that are comparable and spatially integrated. This publication is the first in a series of Volumes that will detail the various structures and regions of the ASGS. Its purpose is to outline the conceptual basis of mesh blocks, the regions of the main structure and the Greater Capital City Statistical Areas and their relationships to each other. The digital boundaries, codes and labels for each of these regions can be obtained as downloads from the ABS website free of charge.

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INTRODUCTION

The ASGS brings together all the regions on which the ABS publishes statistics within the

one framework. It will be used for the 2011 Census of Population and Housing and progressively introduced into other ABS data collections from 1 July 2011.

For support and further information about the implementation of the ASGS please refer to the ABS website at https://www.abs.gov.au/geography or email geography@abs.gov.au.

CLASSIFICATION STRUCTURES

The ASGS classification structures are split into two broads groups, the ABS Structures and the Non-ABS Structures.

The ABS Structures are hierarchies of regions defined and maintained by the ABS. The regions that comprise the ABS Structures will remain unchanged until the next Census of Population and Housing in 2016.

The Non-ABS Structures are hierarchies of regions which are not defined or maintained by the ABS, but for which the ABS is committed to providing a range of statistics. They generally represent administrative units such as Postcode and Local Government Areas.

The ABS Structures are built directly from Mesh Blocks. Non-ABS Structures are approximated by either Mesh Blocks, the Statistical Areas Level 1 (SA1s), or the Statistical Areas Level 2 (SA2s).
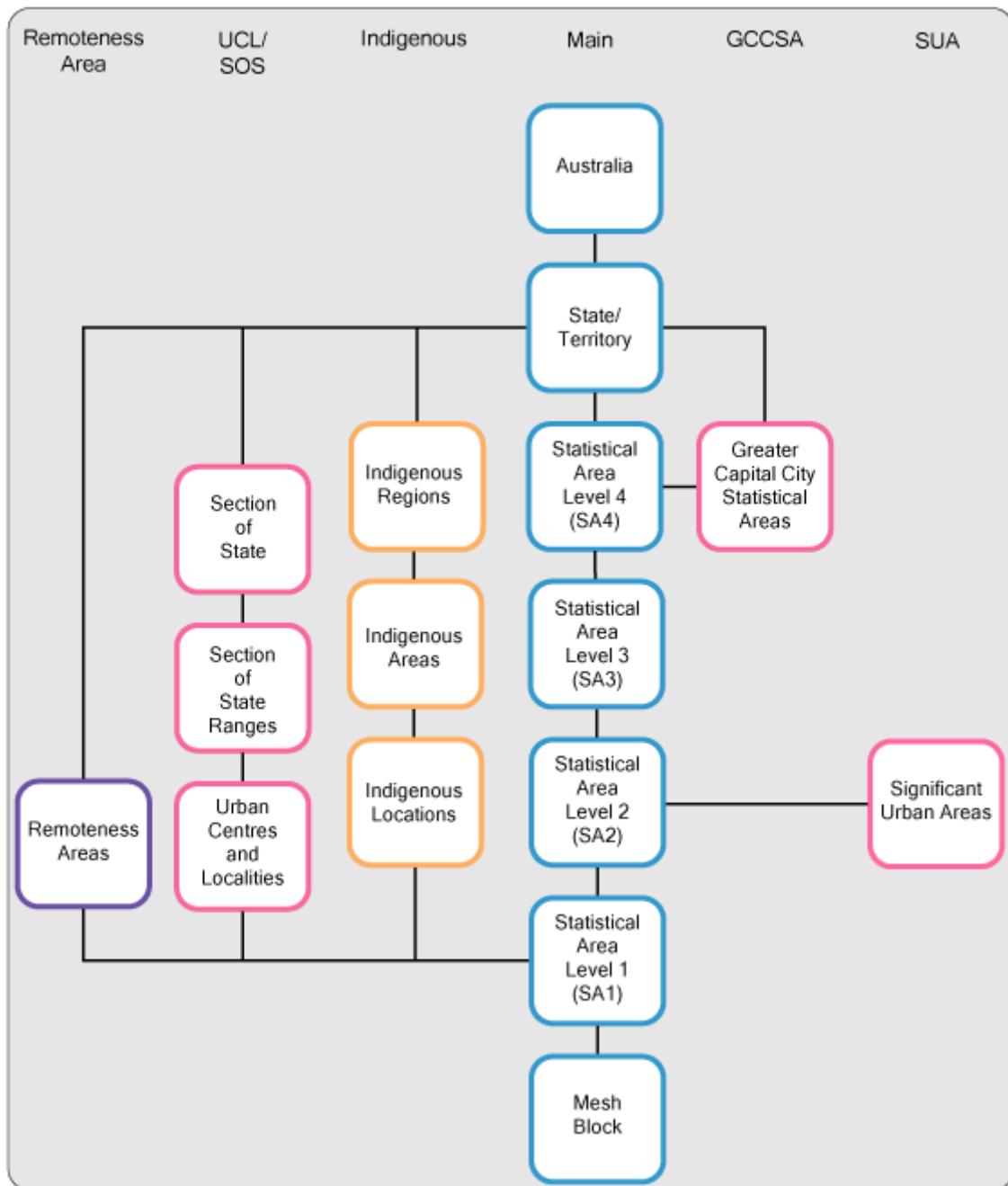
ABS STRUCTURES

The ABS Structures comprise six interrelated hierarchies of regions. They are:

- Main Structure
- Indigenous Structure
- Urban Centres and Localities/Section of State Structure
- Remoteness Area Structure
- Greater Capital City Statistical Area (GCCSA) Structure
- Significant Urban Area Structure.

The Main Structure and GCCSA Structure are discussed in more detail in Chapters 3 and 4. The remaining ABS Structures will be described in later volumes of the ASGS. For details of their release, see Chapter 2.

Diagram 1 depicts the various ABS Structures, their component regions and how they interrelate.

DIAGRAM 1: ASGS ABS STRUCTURES.

NON-ABS STRUCTURES

The Non-ABS Structures comprise eight hierarchies of regions which are not defined or maintained by the ABS, but for which the ABS is committed to providing a range of statistics. They generally represent administrative regions and are approximated by Mesh Blocks, SA1s or SA2s. They are:

- Local Government Areas (LGAs)
- Postal Areas
- State Suburbs
- Commonwealth Electoral Divisions
- State Electoral Divisions
- Australian Drainage Divisions
- Natural Resource Management Regions
- Tourism Regions.

These structures will be the subject of Volume 3 of the ASGS which will be released in July 2011 along with their digital boundaries, codes and labels.

Diagram 2 depicts the various ASGS Non-ABS Structures, their component regions and how they interrelate.
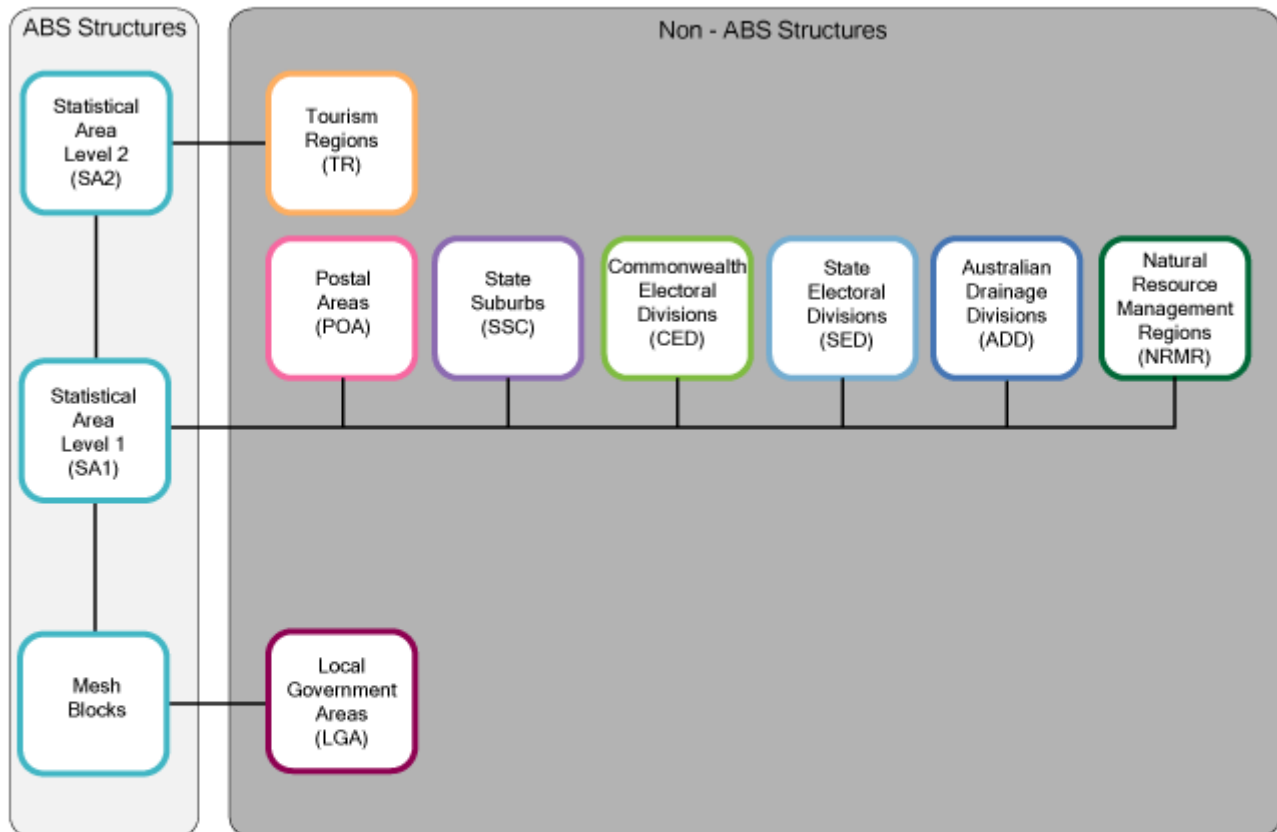
DIAGRAM 2: ASGS NON-ABS STRUCTURES.

PRINCIPLES OF THE ASGS

The ASGS is constructed on the principle that it must fulfil user needs for spatial statistics while also conforming to general classification principles.

Classification Principles

The ASGS is constructed on the basic classification principles that:

- members within one class are of the same type
- classes are uniquely defined so as to be mutually exclusive
- in total, the members in each class cover the entire class.

As a result, the regions of each hierarchical structure of the ASGS are:

- of the same type, delimited by well-defined criteria
- clearly defined by precise boundaries
- uniquely identified by codes and names
- mutually exclusive
- in aggregate, cover the whole area to which that hierarchy applies.

User Needs

The ASGS is designed to meet user needs for social, demographic and economic statistics. The regions of the ASGS below the State or Territory (S/T) level are designed such that they are:

- useful and relevant for data dissemination
- flexible for aggregation into larger units
- useful building blocks for user-defined regions.

DEFINITION OF AUSTRALIA

The ABS uses two definitions of Australia:

· Geographic Australia, used for social and demographic statistics

· Economic Australia used for economic statistics.

Geographic Australia

The ASGS uses the Geographic definition of Australia, as set out in section 17(a) of the Acts Interpretation Act 1901 which currently defines Australia or the Commonwealth as meaning:

'…the Commonwealth of Australia and, when used in a geographical sense, includes the Territory of Christmas Island and the Territory of Cocos (Keeling) Islands, but does not include any other external Territory'.

Included in this definition of Geographic Australia are the:

- States of New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania
- Northern Territory
- Australian Capital Territory (ACT)
- Territory of Cocos (Keeling) Islands
- Territory of Christmas Island
- Jervis Bay Territory.

Jervis Bay Territory was previously included with the ACT for statistical purposes. However, because of its administrative association with the ACT and it's relatively small size it did not meet confidentiality requirements for statistical output. Following the granting of self-government to the ACT in May 1989, this situation was reviewed. From the 1 July 1993 edition of the previous Australian Standard Geographical Classification, Jervis Bay Territory, along with the Territory of Cocos (Keeling) Islands and the Territory of Christmas Island

formed part of a new category, Other Territories, at the S/T level. This convention has continued with the ASGS.

The ASGS excludes Macquarie Island although it is legally part of Tasmania. Macquarie Island is an extremely isolated sub-Antarctic island in the Southern Ocean. It has no permanent population. Any population on Macquarie Island, for example scientific expeditions, is recorded in the Census of Population and Housing and is included in the Migratory - Offshore - Shipping SA2 for Tasmania.

Economic Australia

Economic Australia is defined in the Standard Economic Sector Classification of Australia (cat. no. 1218.0). Economic Australia differs from Geographic Australia in that it, in addition to the areas covered in Geographic Australia, includes:

- Macquarie Island
- Norfolk Island
- Territory of Ashmore and Cartier Islands
- Australian Antarctic Territory
- Coral Sea Islands Territory
- Heard Island and McDonald Islands
- Joint Petroleum Development Area (JPDA)
- Australian territorial waters
- Australian territorial enclaves in foreign countries, such as Australia's embassies, consulates, trade offices, etc.

The ASGS does not use the Economic definition of Australia.

Exclusions from Geographic and Economic Australia

Both the Geographic and Economic definitions of Australia exclude foreign governments' territorial enclaves (for example embassies, consulates, scientific stations, information and immigration offices, etc.) located in Australia.

SUMMARY TABLES

The Main and GCCSA Structures and their component spatial units are shown in table 1.

Table 1: Summary of Main and GCCSA Structures

ASGS Structure	Hierarchical Levels	Spatial Units	Covers whole of Australia?
Main	6	MB, SA1, SA2, SA3, SA4, S/T	Yes
GCCSA	6	MB, SA1, SA2, SA3, SA4, GCCSA	Yes

The number of records in selected ABS Structures is shown in table 2.

Table 2: Summary of Main and GCCSA Units at 1 July 2011

Spatial Unit	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	OT	Aust.

S/T	1	1	1	1	1	1	1	1	1	9
GCCSA	4	4	4	4	4	4	4	3	3	34
SA4	30	19	21	9	11	6	4	3	3	106
SA3	93	67	82	30	35	17	11	11	5	351
SA2	540	435	528	172	252	100	70	112	5	2 214
SA1	17 895	13 339	11 043	4 091	5 512	1 450	541	920	14	54 805
MB	107 325	81 377	67 900	28 209	40 534	12 992	3 198	6 013	79	347 627

Note: Includes Migratory - Offshore - Shipping and No Usual Address

ASGS Related Material and Release Timetable

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ASGS RELATED MATERIAL AND RELEASE TIMETABLE
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ASGS Volume 2: Indigenous Structure
ASGS Volume 3: Non-ABS Structures
ASGS Volume 4: Significant Urban Areas, Urban Centres and Localities/Section of State
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ASGS RELATED MATERIAL AND RELEASE TIMETABLE

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ASGS RELATED MATERIAL AND RELEASE TIMETABLE

The ASGS and its supporting material, including maps, digital boundaries, codes, labels, hierarchies and correspondences will be released progressively from December 2010 until late 2012. All of these products will be available from the ABS website at https://www.abs.gov.au/geography.

Below is the content and timetable for these releases.

SUPPORTING MATERIAL FOR THIS VOLUME

The following supporting material is available:

- maps of the SA4s, SA3s and SA2s in '.pdf' format
- digital boundaries for the regions described in the publication as MapInfo Interchange Format files and ESRI Shape files
- codes, labels and hierarchies for all the regions described in this publication in '.csv' format.

ASGS VOLUME 2: INDIGENOUS STRUCTURE

ASGS Volume 2: Indigenous Structure will be released in July 2011. It will contain a description of the regions which will make up the ASGS Indigenous Structure. These are conceptually similar to the previous Indigenous Geography published as a Census Geographic Area in 2006 and will include:

- Indigenous Regions
- Indigenous Areas
- Indigenous Locations.

At the same time, the ABS will publish the following supporting material:

- digital boundaries for the regions described in the publication as MapInfo Interchange Format files and ESRI Shape files
- codes, labels and hierarchies for all the regions described in the publication in '.csv' format.

ASGS VOLUME 3: NON-ABS STRUCTURES

ASGS Volume 3: Non-ABS Structures will be released in July 2011. It will contain a description of the regions that make up the Non-ABS Structures. These are conceptually similar to the 2006 Census Geographic Areas. They comprise:

- LGAs
- Postal Areas
- State Suburbs
- Commonwealth Electoral Divisions
- State Electoral Divisions
- Australian Drainage Divisions
- Natural Resource Management Regions
- Tourism Regions.

LGAs will be derived using whole Mesh Blocks.

Postal Areas, State Suburbs, Commonwealth Electoral Divisions, State Electoral Divisions, National Resource Management Regions and Australian Drainage Divisions will be derived

using whole SA1s. This situation is comparable to the 2006 Census Geographic Areas in which they were derived using whole Census Collection Districts (CCDs). As SA1s are generally smaller than the 2006 CCDs, these derivations will be more accurate than in the past.

Previously, Tourism Regions were not included in either the ASGC or Census Geographic Areas. They were derived using whole Statistical Local Areas (SLAs). With the introduction of the ASGS, they will be derived using whole SA2s.

At the same time, the ABS will publish the following supporting material:

- digital boundaries for the regions described in the publication as MapInfo Interchange Format files and ESRI Shape files
- codes, labels and hierarchies for all the regions described in the publication in '.csv' format.

ASGS VOLUME 4: SIGNIFICANT URBAN AREAS, URBAN CENTRES AND LOCALITIES/SECTION OF STATE

ASGS Volume 4: Significant Urban Areas and Urban Centres and Localities/ Section of State will be released in October 2012. It will contain a description of the regions which will make up the ASGS Significant Urban Areas, Urban Centre and Localities/Section of State structures.

The Significant Urban Areas structure will define Australia's towns and cities with a population of 10,000 or over. They will replace the ASGC Statistical Districts which defined regional towns and cities with a population over 25,000.

The Urban Centres and Localities/Section of State structures will be conceptually similar to their 2006 ASGC counterparts, but combined into a single hierarchy. SA1s rather than CCDs will be used to define these regions in 2011.

At the same time, the ABS will publish the following supporting material:

- digital boundaries for the regions described in the publication as MapInfo Interchange Format files and ESRI Shape files
- codes, labels and hierarchies for all the regions described in the publication in '.csv' format.

ASGS VOLUME 5: REMOTENESS STRUCTURE

ASGS Volume 5: Remoteness Structure will be released in late 2012. It will contain a description of the regions that will make up the ASGS Remoteness Structure. These will be conceptually similar to the 2006 ASGC Remoteness Structure, using the updated version of Accessibility/Remoteness Index of Australia (ARIA) maintained by the National Centre for Social Applications of GIS (GISCA) at the University of Adelaide, but applied to SA1s rather than CCDs.

At the same time, the ABS will publish the following supporting material:

- digital boundaries for the regions described in the publication as MapInfo Interchange

Format files and ESRI Shape files
- codes, labels and hierarchies for all the regions described in the publication in '.csv' format.

CORRESPONDENCES (CONCORDANCES)

The ABS will develop a suite of correspondences between the ASGS and ASGC and the ABS Structures and Non-ABS Structures of the ASGS. These will be developed progressively from the first release of data from the 2011 Population Census in June 2012. There are a large number of potential correspondences that could be generated, so only the most widely used and reliable will be available on the ABS website. Less widely used or problematical correspondences will also be available by emailing geography@abs.gov.au.

The new series of ABS Correspondences will be Mesh Block based. This will mean they will be simpler and more accurate than correspondences derived from earlier Census data. They will be available weighted by either area or population.

FURTHER INFORMATION

For further information, please email geography@abs.gov.au or follow the link to the ABS Geography web portal at https://www.abs.gov.au/geography.

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MAIN STRUCTURE

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MAIN STRUCTURE

PURPOSE

The Main Structure of the ASGS is used to disseminate a broad range of ABS social, demographic and economic statistics. It is broadly based on the concept of a functional area. The functional area is the area from which people come to access services from a centre. Depending on the level in the Main Structure hierarchy, this centre may be a rural town, a regional city, an urban commercial hub or a capital city CBD.

THE STRUCTURE

The structure has six hierarchical levels comprising in ascending order: Mesh Blocks, SA1s, SA2s, SA3s, SA4s and S/Ts. Each level directly aggregates to the level above. Therefore, SA1s are aggregates of Mesh Blocks and aggregate to SA2s. This principle continues up through the remaining levels of the hierarchy. At each hierarchical level, the component spatial units, for example SA1s, collectively cover all of Geographic Australia (as defined in Introduction) without gaps or overlaps.

THE SPATIAL UNITS

Mesh Blocks

Statistical Area Level 1 (SA1)

Statistical Area Level 2 (SA2)

Statistical Area Level 3 (SA3)

Statistical Area Level 4 (SA4)

State and Territories (S/T)

MESH BLOCKS

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MESH BLOCKS

Mesh Blocks are the smallest geographic region in the ASGS and form the basis for the larger regions of the ASGS. There are approximately 347,000 Mesh Blocks covering the whole of Australia without gaps or overlaps. They broadly identify land use such as residential, commercial, agricultural and parks etc.

Mesh Blocks are the building blocks for all the larger regions of the ASGS. As Mesh Blocks are very small they can be combined together to accurately approximate a large range of other statistical regions.

DELIMITATION OF MESH BLOCKS

The Mesh Blocks were delimited using a number of criteria. The design reflects a balance between the respective considerations.

The criteria for designing Mesh Blocks were published in Information Paper: Mesh Blocks Australia 2003, ABS (cat. no. 1209.0). The criteria were further refined in response to feedback on that information paper, see Information Paper: Draft Mesh Blocks, Australia 2005, ABS (cat. no. 1209.0.55.001).

Listed below are the criteria in the approximate order of importance.

SLA

Mesh Blocks align to 2011 SLA boundaries.

Dwellings

The minimum dwelling count of Mesh Blocks has been designed to be small enough to aggregate accurately to a wide range of spatial units, to enable a ready comparison of statistics between geographical regions, and large enough to protect against accidental disclosure of confidential information. The majority of populated Mesh Blocks contain between 30 and 60 dwellings.

Urban and Rural

Mesh Blocks are designed to be either urban or rural in nature. The primary purpose of this urban/rural split is to distinguish clustered population from dispersed population.

Land Use

Mesh Blocks reflect land use boundaries. For example, residential areas are separated from commercial or agricultural areas. Mesh Blocks are therefore broadly categorised by land use. The land use categories are:

- water
- parkland
- residential
- industrial
- commercial
- education
- hospital/medical
- agricultural
- transport
- other.

The Mesh Block category is not designed to provide a definitive land use mapping. It is purely an indicator of the main planned land use for a Mesh Block.

Cadastre

Where practical, Mesh Block boundaries do not cross cadastral boundaries. Essentially Mesh Blocks are designed to be an aggregation of land parcels.

Gazetted Suburbs and Localities

Where possible, Mesh Blocks are designed to contain or aggregate to whole suburbs or rural localities.

Topography

Mesh Block boundaries reflect topographic features as these have the potential to define communities.

The topographic features used for Mesh Block design include:

- water, rivers and lakes
- transportation, roads and rail
- open space, parkland, nature reserves and forest
- major mountain ranges or escarpments.

Shape

Where practical, Mesh Blocks are designed to be compact in size and shape.

MESH BLOCK CODE

The 11-digit Mesh Block code comprises: S/T identifier (1 digit), Mesh Block identifier (10 digits).

Example:

60106840000

S/T	MB
6	0106840000

Mesh Block Identifier Ranges

Within each S/T, the Mesh Block identifier is in the range 0000000000 to 9999999999.

STATISTICAL AREA LEVEL 1 (SA1)

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STATISTICAL AREA LEVEL 1 (SA1)

The SA1s have been designed as the smallest unit for the release of Census data.

SA1s are built from whole Mesh Blocks. Whole SA1s aggregate directly to SA2s in the Main Structure, as well as all of the Non-ABS Structures except LGAs and Tourism Regions. SA1s do not cross S/T borders. There are approximately 55,000 SA1s. In aggregate, they cover the whole of Australia without gaps or overlaps.

DELIMITATION OF SA1

The SA1s were delimited using a number of criteria. The design reflects a balance between the respective considerations.

Listed below are the criteria in the approximate order of importance.

Population

SA1s generally have a population of 200 to 800 persons, and an average population of about 400 persons. SA1s in remote and regional areas generally have smaller populations than those in urban areas.

SA1s closely bound small rural towns with a population of 180 persons or more.

Indigenous Population

SA1s are designed to identify discrete indigenous communities with an aim to exclude as much of the non-indigenous population as possible.

SA1s closely bound Indigenous communities with a population of 90 persons or more.

Urban and Rural

SA1s are designed to be either urban or rural in character.

Urban SA1s contain one or more of the following:

- residential development with a density over 200 persons per square kilometre
- built infrastructure including
  - ports
  - airports
  - industrial, commercial and retail development
  - large sports complexes
  - educational campuses
  - places of worship
  - military camps
  - research stations
- local parks and playgrounds
- local sports facilities and ovals
- vegetation corridors
- golf courses
- cemeteries
- lakes, rivers, riverbanks, creeks and drainage reserves surrounded by development of an urban character.

Rural SA1s contain one or more of the following:

- residential development with a density less than 200 persons per square kilometre
- agriculture
- national parks
- defence reserves
- Indigenous lands
- mines
- stockyards
- lakes, rivers, riverbanks, creeks and drainage reserves not surrounded by development of an urban character.

LGA

For the 2011 Edition of the ASGS, SA1s closely reflect LGA boundaries.

Transport

SA1s are generally internally connected by road transport. Exceptions include islands, which are either combined with the nearest onshore SA1 or grouped to form an SA1.

Gazetted Suburbs and Localities

Where possible, the SA1s have been designed to contain or aggregate to whole gazetted suburbs or rural localities. In urban areas, the gazetted suburbs usually consist of one or more SA1s.

In regional and remote areas, gazetted localities were sometimes too small to represent an SA1 in their own right. Where this occurred, four general criteria were used to cluster smaller localities:

- a shared road network
- similar physical geography
- shared community facilities
- being contained within the one LGA.

Growth

SA1s have been created in anticipation of development likely to occur up to the time of the 2011 Census of Population and Housing (August 2011).

Prisons

Prisons, remand centres and juvenile detention centres with a population of over 200 persons are generally represented by their own SA1.

Defence Bases

Defence bases with a population of over 200 persons are generally represented by their own SA1.

Zero SA1

Zero SA1s are SA1s with a nil or nominal population. They are created to represent large unpopulated areas that are not easily combined with surrounding populated SA1s.

They may include one or more of:

- airports
- ports
- commercial developments
- industrial developments
- large shopping complexes
- large sporting complexes
- large educational campuses
- research stations
- large cemeteries
- 18-hole golf courses
- national parks
- large urban parks
- defence reserves
- restricted Commonwealth land
- groups of unpopulated islands
- very large areas of land which are unlikely ever to be populated, for example extreme desert or otherwise inhospitable terrain
- lakes.

Special Purpose SA1

There are non-spatial SA1s for Migratory, Offshore, Shipping and No Usual Address in each S/T.

SA1 CODING STRUCTURE

SA1s are not named. They are identified either by an 11-digit fully hierarchical code, or by a truncated 7-digit code comprising the S/T, SA2 and SA1 identifiers. The SA1 identifier is a 2-digit code, assigned within an SA2. An SA1 code is only unique within an S/T when it is preceded by the S/T identifier.

11-digit Code

An 11-digit SA1 code is fully hierarchical, and comprises: S/T identifier, SA4 identifier, SA3 identifier, SA2 identifier and a SA1 identifier.

Example:

SA1 50302104118

S/T	SA4	SA3	SA2	SA1
5	03	02	1041	18

7-digit Code

A 7-digit SA1 code is not fully hierarchical and comprises: S/T identifier, SA2 identifier and SA1 identifier.

Example:

SA1 5104118

S/T	SA2	SA1
5	1041	18

Future Allocation of SA1 Codes

In the future, it may be necessary to allocate new codes. If an SA1 is abolished, or changes significantly between editions of the ASGS, the SA1 identifier will be retired and the replacement SA1(s) given the next available previously unused SA1 identifier within the SA2.

SA1 Identifier Ranges

Within each SA2, the SA1 identifier is in the data range 01 to 99.

STATISTICAL AREA LEVEL 2 (SA2)

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STATISTICAL AREA LEVEL 2 (SA2)

The SA2s are a general-purpose medium-sized area built from whole SA1s. Their aim is to represent a community that interacts together socially and economically.

Whole SA2s aggregate directly to SA3s in the Main Structure, as well as Significant Urban Areas. SA2s do not cross S/T borders. There are 2,196 SA2 spatial units. In aggregate, they cover the whole of Australia without gaps or overlaps. Jervis Bay Territory, the Territory of the Cocos (Keeling) Islands and the Territory of Christmas Island are each represented by an SA2.

The SA2 is the lowest level of the ASGS structure for which Estimated Resident Population (ERP), Health and Vitals and other non-Census ABS data are generally available.

DELIMITATION OF SA2

The SA2s were delimited using a number of criteria. The design reflects a balance between the respective considerations.

Listed below are the criteria in the approximate order of importance.

Population

SA2s generally have a population range of 3,000 to 25,000 persons, and have an average population of about 10,000 persons. SA2s in remote and regional areas generally have smaller populations than those in urban areas. There are some SA2s outside these bounds, due to other considerations such as:

- the relative sparseness of the population in remote regions (an SA2 with a population of 3,000 may cover too large and diverse a geographical area to be a meaningful unit)
- the benefit of preserving recognisable areas for which there is a considerable amount of historical data
- isolated geographical areas, such as islands or other isolated populations
- the need to avoid arbitrary subdivisions of otherwise coherent regions, such as very large suburbs or regional towns.

Functional

A functional area is the area from which people come to access services at a centre. This centre may be a rural town, a regional city, a commercial and transport hub within a major

city, or the major city itself. The concept of a functional area is used at all levels of the ABS Main Structure, but is essential to the design of the SA2s outside major urban areas. A centre and its functional area are represented by one or more SA2s. A rural town and its functional area may be combined into a single SA2. A larger town may be identified by its own SA2 and its functional area by a second SA2. Larger towns and regional cities may be represented by several SA2s, as may their functional areas.

Within cities, the SA2s represent gazetted suburbs rather than functional areas. See below for more detail.

In remote areas, it is difficult to apply the concept of a functional area without creating regions which are too large and diverse. In remote areas, the SA2s were designed to represent meaningful regions, useful for statistical analysis.

Growth

SA2s containing regional towns or on the fringes of larger cities have been designed to contain: the urban area, any immediately associated semi urban development and likely growth in the next 10 to 20 years. This is to ensure that the SA2 boundaries remain stable over several Population Censuses.

Gazetted Suburbs and Localities

Where possible, the SA2s have been designed around whole gazetted suburbs or rural localities. This is to make the regions as meaningful as possible to users unfamiliar with the statistical geography and to facilitate address coding to the various units of the ASGS.

In regional and remote areas, gazetted localities were usually too small to represent an SA2 in their own right and were combined on the basis of whether they formed part of a functional area.

In the major cities, SA2s often represent single suburbs. Suburb size is variable within and between cities and they do not always make a convenient region to be used directly as an SA2. Where this occurs five general criteria have been used to cluster smaller suburbs together or break up extremely large suburbs:

- a shared road network
- shared community facilities
- LGA boundaries
- shared historical or social links
- socio-economic similarity.

LGA

LGA boundaries were considered in the design of the SA2s and were often adopted where the LGA boundary satisfied one or more of the following:

- it closely aligned with gazetted suburb boundaries
- it reflected the underlying settlement pattern
- it represented the functional area of a regional town or city
- had a high degree of recognition amongst stakeholders
- it aligned to a significant recognisable geographical feature.

Zero SA2

Zero SA2s have a nil or nominal population. They are created to represent large unpopulated areas that are not easily combined with surrounding populated SA2s.

They may include:

- major infrastructure (ports, airports)
- significant bodies of water
- major commercial and industrial zones
- national parks
- defence land
- very large urban parks
- very large sporting precincts.

Special Purpose SA2

There are non-spatial SA2s for Migratory - Offshore - Shipping and No Usual Address in each S/T.

SA2 NAMES

The key criteria for SA2 names are that they be:

- meaningful
- have a maximum of 40 characters
- unique, i.e. not shared by any other SA2 in Australia.

In large urban areas, SA2s are named for the gazetted suburbs that comprise them:

- where an SA2 is made from a single suburb, it will retain the name of the suburb, for example:
  - Duffy
- where a single large suburb is split into more than one SA2, it will retain the name of the suburb and a geographic identifier, for example:
  - Mount Waverley - South
  - Mount Waverley - North
- where an SA2 is made up from 2 or 3 suburbs, then the SA2 name is a concatenation of the suburb names, for example:
  - Waratah - North Lambton
  - Bayswater - Embleton - Bedford
- where an SA2 is made up of 4 or more suburbs it will be named for the larger or more prominent suburbs, or given a local identifier, for example:
  - Homebush Bay - Silverwater
  - Pioneer Valley.

In rural areas, SA2s are named for the gazetted localities that comprise them, or the towns, city, or region with which they are associated, for example:

- Goulburn
- Benalla Region
- Townsville - South

- Bulahdelah - Stroud.

Where an SA2 name is duplicated in two or more S/Ts, the S/T abbreviation is attached to the SA2 name, for example:

- O'Connor (ACT)
- O'Connor (WA).

SA2 CODING STRUCTURE

An SA2 is identifiable either by a 9-digit fully hierarchical code, or by a truncated 5-digit code comprising the S/T and SA2 identifiers. The SA2 identifier is a 4-digit code, assigned in alphabetical order within an SA3. An SA2 code is only unique within an S/T if it is preceded by the S/T identifier.

9-digit Code

A 9-digit SA2 code is fully hierarchical, and comprises: S/T identifier, SA4 identifier, SA3 identifier, SA2 identifier.

Example:

503021041 Perth City

S/T	SA4	SA3	SA2	SA2 Name
5	03	02	1041	Perth City

5-digit Code

A 5-digit SA2 code is not hierarchical, and comprises only S/T identifier, SA2 identifier.

Example:

51041 Perth City

S/T	SA2	SA2 Name
5	1041	Perth City

Future Allocation of SA2 Codes

In the future, it may be necessary to allocate new codes. If an SA2 is abolished, or changes significantly between editions of the ASGS, the SA2 identifier will be retired and the replacement SA2(s) given the next available previously unused SA2 identifier within the S/T.

SA2 Identifier Ranges

Within each S/T, the SA2 identifier is in the data range 0001-7999. SA2 identifiers in the range 8000-8999 are reserved for processing within the ABS. The range 9000 to 9999 is reserved for special purpose SA2s.

STATISTICAL AREA LEVEL 3 (SA3)

Contents >> Main Structure >> STATISTICAL AREA LEVEL 3 (SA3)

STATISTICAL AREA LEVEL 3 (SA3)

The SA3s provide a standardised regional breakup of Australia. The aim of SA3s is to create a standard framework for the analysis of ABS data at the regional level through clustering groups of SA2s that have similar regional characteristics.

SA3s are built from whole SA2s. Whole SA3s aggregate directly to SA4s in the Main Structure. SA3s do not cross S/T borders. There are 333 SA3 spatial units. In aggregate, they cover the whole of Australia without gaps or overlaps.

DELIMITATION OF SA3

Listed below are the criteria for the delimitation of SA3s in the approximate order of importance.

Population

In general, the SA3s are designed to have populations between 30,000 and 130,000 persons. The lack of specific statistical requirements provides the SA3s with considerable flexibility in terms of population variability and this allows the definition of meaningful regional areas to take precedence over population criteria. As a result, there are a number of SA3s with populations above 130,000 or below 30,000.

Functional

SA3s are often the functional areas of regional towns and cities with a population in excess of 20,000 or clusters of related suburbs around urban commercial and transport hubs within the major urban areas.

Identifying Regions

The regional breakups have been designed to reflect regional identity. These are areas with both geographic and socio-economic similarities. In many cases, these areas are defined by existing administrative boundaries such as State Regional Development Areas or one or more LGAs.

Zero SA3

Zero SA3s have a nil or nominal population. They are created to represent large unpopulated areas that are not easily combined with surrounding populated SA3s, such as large National Parks on the fringes of large urban areas.

Special Purpose SA3

There are non-spatial SA3s for Migratory - Offshore - Shipping and No Usual Address in each S/T.

SA3 NAMES

The key criteria for SA3 names are that they be:

- meaningful
- have a maximum of 40 characters
- unique, i.e. not shared by any other SA3 in Australia.

SA3s are named according to the areas they represent:

- where an SA3 represents a well-known regional area or a State Regional Development Area it is named after that region, for example:
  - Southern Highlands
  - Mid West
- where an SA3 represents the functional area of a regional city it is named after that city, for example, Wagga Wagga. In some cases the name of an associated town or region is also included, for example:
  - Griffith - Murrumbidgee (West)
- where an SA3 represents an economic hub within a major city it is generally named to reflect that hub, for example:
  - Parramatta
- where an SA3 represents a group of related suburbs it is named after one or more of those suburbs that reflect its location and extent, for example:
  - North Sydney - Mosman
  - Brunswick - Coburg
- where an SA3 name is not unique within Australia, it is followed by the S/T abbreviation in brackets, for example:
  - Central Highlands (Tas.)
  - Central Highlands (Qld).

SA3 CODING STRUCTURE

An SA3 is identified by a 5-digit hierarchical code. This comprises a 1-digit S/T identifier followed by a 2-digit SA4 identifier, unique within each S/T, and a 2-digit SA3 identifier, unique within each SA4.

Example:

11401 Shoalhaven

S/T	SA4	SA3	SA3 Name

1	14	01	Shoalhaven

Future Allocation of SA3 Codes

In the future, it may be necessary to allocate new codes. If an SA3 is abolished, or changes significantly between editions of the ASGS, the SA3 identifier will be retired and the replacement SA3(s) given the next available previously unused SA3 identifier within the SA4.

SA3 Identifier Ranges

Within each S/T, the SA3 identifier is in the data range 01-79. SA3 identifiers in the range 80-99 are reserved for special purpose SA3s.

STATISTICAL AREA LEVEL 4 (SA4)

Contents >> Main Structure >> STATISTICAL AREA LEVEL 4 (SA4)

STATISTICAL AREA LEVEL 4 (SA4)

The SA4 regions are the largest sub-State regions in the Main Structure of the ASGS. They are designed for the output of labour force data and reflect labour markets within each State and Territory within the population limits imposed by the Labour Force Survey sample. SA4s provide the best sub-state socio-economic breakdown in the ASGS.

SA4s are built from whole SA3s. Whole SA4s aggregate directly to S/Ts in the Main Structure and GCCSAs. SA4s do not cross S/T borders. There are 88 SA4 spatial units. In aggregate, they cover the whole of Australia without gaps or overlaps.

DELIMITATION OF SA4

Listed below are the criteria for the delimitation of SA4s.

Population

A minimum of 100,000 persons was set for the SA4s, although there are some exceptions to this. In regional areas, SA4s tend to have populations closer to the minimum (100,000 - 300,000). In metropolitan areas, the SA4s tend to have larger populations (300,000 - 500,000).

Labour Markets

Labour markets were a key consideration in the design of SA4s. The reason for this is that Labour force data has two geographic components to it - the labour supply (where people live) and demand (where people work). For statistical purposes, it is ideal to maximise the extent to which the data output region spatially contains both sets of geographic locations. Labour markets are geographic regions, which reflect the high degree of interconnectivity between the labour supply and demand. By reflecting labour markets, the output data is relevant to both labour supply and demand.

The ABS consulted with a number of experts on labour market geography to identify labour markets within Australia. The resulting labour markets were characterised by a large number of very small regional labour markets, a smaller number of medium sized labour markets around regional centres, and very large labour markets representing the major metropolitan centres. While this may be an accurate reflection of Australian labour markets, many regions do not meet the minimum population criterion.

The smaller regional labour markets were amalgamated based on travel to work interactions as well as industry and regional similarities to create SA4s of approximately 100,000 to 300,000 persons. The medium sized regional centre labour markets that exceeded 100,000 persons (for example Cairns, Qld) were preserved as far as possible as SA4s that directly represent the labour market, though in some cases small closely related labour markets were included in these SA4s. The very large major metropolitan labour markets were split to reflect major employment hubs and their primary labour supply catchments. These are generally larger population SA4s, 300,000 to 500,000 persons, reflecting the fact that they represent labour markets with large populations.

Special Purpose SA4

There are non-spatial SA4s for Migratory - Offshore - Shipping and No Usual Address in each S/T.

SA4 NAMES

The key criteria for SA4 names are that they be:

- meaningful
- have a maximum of 40 characters
- unique, i.e. not shared by any other SA4 in Australia.

SA4s are named according to the areas they represent:

- where an SA4 represents a labour market of a major city it is named after that city, for example:
    - Bendigo
- where an SA4 represents an employment centre within a larger city it is generally named to reflect both the larger city and the employment centre or part of the city that it represents, for example:
    - Melbourne - Inner South
    - Sydney - Blacktown
- where an SA4 represents a collection of labour markets in regional areas it is named using either a description of that part of the S/T or after one or more well-known regional areas that it closely replicates, for example:
    - Latrobe - Gippsland
- where this name does not identify it within Australia, it is generally preceded by the S/T

name, for example:

- Western Australia - Wheat Belt
- Queensland - Outback.

SA4 CODING STRUCTURE

An SA4 is identified by a 3-digit hierarchical code. This comprises a 1-digit S/T identifier, which precedes a 2-digit SA4 identifier, which is unique within each S/T.

Example:

102 Central Coast

S/T	SA4	SA4 Name
1	02	Central Coast

Future Allocation of SA4 Codes

In the future, it may be necessary to allocate new codes. If an SA4 is abolished, or changes significantly between editions of the ASGS, the SA4 identifier will be retired and the replacement SA4(s) given the next available previously unused SA4 identifier within the S/T.

SA4 Identifier Ranges

Within each State, the SA4 identifier is in the range 01- 79. SA4 identifiers in the range 80-99 are reserved for special purpose SA4s.

STATE AND TERRITORY (S/T)

Contents >> Main Structure >> STATE AND TERRITORY (S/T)

STATE AND TERRITORY (S/T)

The S/T is the largest spatial unit in the Main Structure and in the ASGS.

Six States and five territories are recognised in the ASGS:

- New South Wales
- Victoria
- Queensland
- South Australia
- Western Australia

- Tasmania
- Northern Territory
- Australian Capital Territory
- Jervis Bay Territory
- Territory of Christmas Island
- Territory of the Cocos (Keeling) Islands.

These spatial units are political entities with fixed boundaries. Except for the last three mentioned Territories, the total area of each S/T, including their offshore islands, is used for statistical purposes as a separate spatial unit in the ASGS. Jervis Bay Territory, and the Territories of Christmas Island and Cocos (Keeling) Islands are included as one spatial unit at the S/T level under the category of Other Territories.

S/Ts consist of one or more SA4s. In aggregate, they cover Australia without gaps or overlaps.

S/Ts are identified by unique one-digit codes within Australia as follows:

State and Territory Codes and Names

Code	S/T
1	New South Wales
2	Victoria
3	Queensland
4	South Australia
5	Western Australia
6	Tasmania
7	Northern Territory
8	Australian Capital Territory
9	Other Territories

Greater Capital City Statistical Area (GCCSA)

Contents >> Greater Capital City Statistical Area (GCCSA)

GREATER CAPITAL CITY STATISTICAL AREA (GCCSA)
Delimitation of GCCSA
GCCSA names
GCCSA coding structure

This section contains the following subsection :
GREATER CAPITAL CITY STATISTICAL AREA (GCCSA)

GREATER CAPITAL CITY STATISTICAL AREA (GCCSA)

GREATER CAPITAL CITY STATISTICAL AREA (GCCSA)

The GCCSAs represent the socio-economic extent of each of the eight State and Territory
capital cities. This provides a stable and relevant geographic definition for the release of
socio-economic survey data collected only within capital cities as well as other survey data
requiring large population output regions. Within each S/T, the area not defined as being
part of the greater capital city is represented by a Rest of State region.

GCCSAs are aggregates of SA4s. The GCCSAs combined with the Rest of State regions
cover the whole of Australia without gaps or overlaps and aggregate directly to S/T.

For the 2011 edition of the ASGS, there are 16 GCCSA regions. There are 8 regions
representing each of the Australian State and Territory capital cities and 8 regions covering
the rest of each S/T. There is only one GCCSA for the ACT and one for the Other Territories
of Jervis Bay, Christmas Island and Cocos (Keeling) Islands.

DELIMITATION OF GCCSA

Population

GCCSAs do not have population criteria.

Functional

As GCCSAs are designed to represent a socio-economic definition of each of the eight
State and Territory capital cities, this means the greater capital city boundary includes
people who regularly socialise, shop or work within the city, but live in the small towns and
rural areas surrounding the city. It does not define the built up edge of the city.

GCCSA NAMES

GCCSAs are named according to the cities they represent, for example, Greater Sydney.

The remainder of the S/T is named Rest of <State>, for example, Rest of NSW.

The exceptions to this are the ACT, as the whole of the ACT is included in the GCCSA, and
the OTs, which do not have a capital city.

GCCSA CODING STRUCTURE

A GCCSA is identified by a 5-character alphanumeric code. This comprises a 1-digit S/T identifier followed by a 4-character GCCSA identifier that is unique within each S/T.

Example:

1GSYD Greater Sydney

- S/T identifier: 1

- GCCSA identifier: GSYD

Example:

Rest of NSW - 1RNSW

- S/T identifier: 1

- GCCSA identifier: RNSW

Special Purpose GCCSA

There are non-spatial GCCSAs for Migratory - Offshore - Shipping and No Usual Address in each S/T.

Special Purpose Codes

Contents >> Special Purpose Codes

SPECIAL PURPOSE CODES
Purpose
Types of special purpose codes
Special purpose code structure
Collection specific coding conventions

This section contains the following subsection :
    SPECIAL PURPOSE CODES

SPECIAL PURPOSE CODES

Contents >> Special Purpose Codes >> SPECIAL PURPOSE CODES

SPECIAL PURPOSE CODES

PURPOSE

Special purpose codes allow address data to be coded to a non-spatial value. This occurs where there is insufficient information to code to a physical geographic area. For example, where someone is in transit on Census night or where an incomplete address has been supplied. They have been created for each hierarchical level within the Main Structure and the GCCSA Structure.

TYPES OF SPECIAL PURPOSE CODES

Migratory

Migratory is used to code people who are in transit on long distance trains, buses, aircraft and long haul road transport vehicles on Census night.

Offshore

Offshore is used to code people on oil rigs and drilling platforms etc. It is also used for expeditioners in the Australian Antarctic Territory.

Shipping

Shipping is used to code people who are on board vessels in Australian waters, in or between Australian ports on Census night.

No usual address

No usual address is used to code people with no fixed place of abode.

SPECIAL PURPOSE CODE STRUCTURE

The following examples show these for NSW.

Mesh Block Special Purpose Codes

Migratory - Offshore - Shipping

S/T	Mesh Blocks	Description
1	8000000778	Migratory
1	9000000779	Offshore
1	7000005777	Shipping
1	7000004777	Shipping
1	7000003777	Shipping

| 1 | 7000002777 | Shipping |
| 1 | 7000001777 | Shipping |

No usual address

S/T	Mesh Blocks
1	0000009499

SA1, SA2, SA3, SA4 Special Purpose Codes

Migratory - Offshore - Shipping

S/T	SA4	SA3	SA2	SA1	Description
1	97	97	9799	91	Migratory
1	97	97	9799	92	Offshore
1	97	97	9799	93	Shipping

There are no Migratory or Offshore SA1s for the OT. There are no Offshore or Shipping SA1s for the ACT.

No usual address

S/T	SA4	SA3	SA2	SA1
1	99	99	9499	99

GCCSA Special Purpose Codes

Migratory - Offshore - Shipping

S/T	GCCSA
1	9799

No usual address

S/T	GCCSA
1	9499

COLLECTION SPECIFIC CODING CONVENTIONS

ABS collections use various conventions to denote circumstances such as: not applicable, overseas visitors etc. These will be explained in the supporting documentation for each release.

ASGS Maintenance

Contents >> ASGS Maintenance

ASGS MAINTENANCE
Mesh Blocks
ABS Structures
Non-ABS Structures
New structures

This section contains the following subsection :
    ASGS Maintenance

ASGS Maintenance

Contents >> ASGS Maintenance >> ASGS Maintenance

ASGS MAINTENANCE

A new edition of the ASGS Manual will be published in late 2015 or early 2016 with a date of effect from 1 July 2016. That version of the ASGS will be used for the 2016 Census of Population and Housing. All levels and regions of the ASGS will be reviewed before the 2016 Census of Population and Housing. This chapter summarises the terms of the review and an approximate time frame.

MESH BLOCKS

Between Population Censuses, the Mesh Blocks will be maintained, to reflect:

- new development
- changes in land use
- alignment to physical features

- alignment to administrative boundaries.

Where possible, changes will be accommodated by simple splits of existing Mesh Blocks.

A draft set of revised Mesh Block boundaries will be published before the 2016 Census, for stakeholder comment.

ABS STRUCTURES

The ABS will publish the ABS Structures at each Census. Between Population Censuses, the ABS will consult with stakeholders on their conceptual basis and usefulness.

Main Structure and GCCSA

A draft revised set of Main Structure boundaries will be published, before the 2016 Census, for stakeholder comment. The revised boundaries will be available in late 2015 or early 2016 with a date of effect of the 1 July 2016.

The following principles will be applied to any redesign of the Main Structure and GCCSAs:

- the boundaries for a region will not be changed unless they no longer meet the design criteria for that class of region
- where possible, changes will be accommodated by simple splits of existing regions
- where it is not possible for changes to be accommodated by a simple split they will, as far as possible, be based on amalgamation and redistribution of whole regions from the next level down in the hierarchy
- regions will be designed with a view to them remaining stable over a period of 10 to 20 years
- minor boundary alignment changes will be made to improve the alignment to the underlying physical geography.

SAs 1-4 will not necessarily be changed to reflect changes in administrative boundaries.

Other ABS Structures

The conceptual basis of Indigenous Structure, Remoteness Areas, Urban Centres and Localities/Section of State and Significant Urban Areas will be reviewed prior to the 2016 Census of Population and Housing.

The revised Indigenous Structure digital boundaries, codes and labels will be published prior to the release of data from the 2016 Population of Census and Housing.

NON-ABS STRUCTURES

Non-ABS Structures will be reviewed annually to accommodate any hierarchy or boundary changes. The ABS will publish supporting documentation, tables and correspondences between the Non-ABS Structure and relevant regions of the ASGS.

Generally, the revised structure will come into effect on 1 July each year. This may be brought forward for boundaries with critical stakeholder needs.

NEW STRUCTURES

New ABS and Non-ABS Structures can be added to the ASGS at any time provided they meet the following criteria:

- they satisfy the classification principles listed on page 6
- they can be built up from, or reasonably approximated by Mesh Blocks
- they are generally accepted and will be used by key stakeholders
- the ABS is prepared to publish data for the proposed regions.

The process for introducing a new structure into the ASGS is:

- the ABS accepts a stakeholder case to include a new structure
- a period of initial consultation with key stakeholders to determine the acceptability, feasibility and usefulness of the proposed structure
- if there is sufficient consensus, the ABS will publish one or more information papers; which may call for written submissions from all stakeholders
- if the structure is accepted, the ABS will develop the new structure, with additional consultation if relevant
- when the design is complete, the ABS will publish the new structure with: a date of effect, digital boundaries (for ABS Structures), supporting documentation and correspondences.

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History of Changes

This document was added or updated on 21/04/2011.

21/04/2011 Addition of GCCSA pdf maps to the ASGS Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011.

Explanatory Notes

Metadata for Digital Boundary Files

METADATA FOR DIGITAL BOUNDARY FILES

Australian Statistical Geography Standard (ASGS) Volume 1 - Main Structure and Greater Capital City Statistical Areas (cat no. 1270.0.55.001)

Data Currency: 1 July 2011

Presentation Format: Digital boundaries

CUSTODIAN

Custodian: Australian Bureau of Statistics

DESCRIPTION

Abstract:

The Australian Statistical Geography Standard (ASGS) is a hierarchical classification system of geographical regions and consists of a number of interrelated structures. The ASGS brings all the regions for which the Australian Bureau of Statistics (ABS) publishes statistics within the one framework and will be used by the ABS for the collection and dissemination of geographically classified statistics from the 1 July 2011. It provides a common framework of statistical geography and enables the production of statistics which are comparable and can be spatially integrated.

This product, **Australian Statistical Geography Standard (ASGS) Volume 1 - Main Structure and Greater Capital City Statistical Areas** (cat no. 1270.0.55.001), is the first in a series of Volumes that will detail the various structures and regions of the ASGS. Its purpose is to outline the conceptual basis of the regions of the Main Structure and the Greater Capital City Statistical Areas and their relationship to each other. This product contains several elements including the ASGS manual, maps, codes and names and the digital boundaries current for the ASGS Edition 2011 (date of effect 1 July 2011).

The digital boundaries for Volume 1 of the ASGS are the spatial units for the main structure and the Greater Capital City Statistical Areas. These spatial units are:

- Mesh Blocks (MB)
- Statistical Area Level 1 (SA1)
- Statistical Area Level 2 (SA2)
- Statistical Area Level 3 (SA3)
- Statistical Area Level 4 (SA4)
- Greater Capital City Statistical Areas (GCCSA)
- State and Territory (S/T).

File Nomenclature:

MB file names have the format <file type>_<2011>_<STATE> where:

>   <file type> represents the type of boundaries in each file
>>   MB = Mesh Block
>   <2011> represents 2011 the year of the Australian Statistical Geography Standard (ASGS) Edition
>   <STATE> indicates the data covers a State as defined in the ASGS manual

Other file names have the format <file type>_<2011>_<AUST> where:

>   <file type> represents the type of boundaries in each file
>>   SA1 = Statistical Area Level 1

SA2 = Statistical Area Level 2
SA3 = Statistical Area Level 3
SA4 = Statistical Area Level 4
GCCSA = Greater Capital City Statistical Area
STE = State
<2011> represents 2011 the year of the Australian Statistical Geography Standard (ASGS) Edition
<AUST> indicates the data covers all of Australia as defined in the ASGS manual

Within the files, the States and Territories are identified by unique one digit codes.

State and Territory Codes and Names

Code	S/T
1	New South Wales
2	Victoria
3	Queensland
4	South Australia
5	Western Australia
6	Tasmania
7	Northern Territory
8	Australian Capital Territory
9	Other Territories

File Attributes:

All tables show file type, file name, spatial unit field and the data type.

File Type: Mesh Block (MB)

File Name (s): MB_2011_NSW; MB_2011_VIC; MB_2011_QLD; MB_2011_SA; MB_2011_WA; MB_2011_TAS; MB_2011_NT; MB_2011_ACT & MB_2011_OT

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	MB_CODE_2011	MB_CODE11	Character(11)
2	MB_CATEGORY_2011	MB_CAT11	Character(50)
3	SA1_MAINCODE_2011	SA1_MAIN11	Character(11)
4	SA1_7DIGITCODE_2011	SA1_7DIG11	Character(7)
5	SA2_MAINCODE_2011	SA2_MAIN11	Character(9)
6	SA2_5DIGITCODE_2011	SA2_5DIG11	Character(5)
7	SA2_NAME_2011	SA2_NAME11	Character(50)
8	SA3_CODE_2011	SA3_CODE11	Character(5)
9	SA3_NAME_2011	SA3_NAME11	Character(50)
10	SA4_CODE_2011	SA4_CODE11	Character(3)
11	SA4_NAME_2011	SA4_NAME11	Character(50)
12	GCCSA_CODE_2011	GCC_CODE11	Character(5)
13	GCCSA_NAME_2011	GCC_NAME11	Character(50)
14	STATE_CODE_2011	STE_CODE11	Character(1)
15	STATE_NAME_2011	STE_NAME11	Character(50)

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
16	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: Statistical Area Level 1 (SA1)

File Name (s): SA1_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	SA1_MAINCODE_2011	SA1_MAIN11	Character(11)
2	SA1_7DIGITCODE_2011	SA1_7DIG11	Character(7)
3	SA2_MAINCODE_2011	SA2_MAIN11	Character(9)
4	SA2_5DIGITCODE_2011	SA2_5DIG11	Character(5)
5	SA2_NAME_2011	SA2_NAME11	Character(50)
6	SA3_CODE_2011	SA3_CODE11	Character(5)
7	SA3_NAME_2011	SA3_NAME11	Character(50)
8	SA4_CODE_2011	SA4_CODE11	Character(3)
9	SA4_NAME_2011	SA4_NAME11	Character(50)
10	GCCSA_CODE_2011	GCC_CODE11	Character(5)
11	GCCSA_NAME_2011	GCC_NAME11	Character(50)
12	STATE_CODE_2011	STE_CODE11	Character(1)
13	STATE_NAME_2011	STE_NAME11	Character(50)
14	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: Statistical Area Level 2 (SA2)

File Name (s): SA2_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	SA2_MAINCODE_2011	SA2_MAIN11	Character(9)
2	SA2_5DIGITCODE_2011	SA2_5DIG11	Character(5)
3	SA2_NAME_2011	SA2_NAME11	Character(50)
4	SA3_CODE_2011	SA3_CODE11	Character(5)
5	SA3_NAME_2011	SA3_NAME11	Character(50)
6	SA4_CODE_2011	SA4_CODE11	Character(3)
7	SA4_NAME_2011	SA4_NAME11	Character(50)
8	GCCSA_CODE_2011	GCC_CODE11	Character(5)
9	GCCSA_NAME_2011	GCC_NAME11	Character(50)
10	STATE_CODE_2011	STE_CODE11	Character(1)
11	STATE_NAME_2011	STE_NAME11	Character(50)
12	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: Statistical Area Level 3 (SA3)

File Name (s): SA3_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	SA3_CODE_2011	SA3_CODE11	Character(5)

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
2	SA3_NAME_2011	SA3_NAME11	Character(50)
3	SA4_CODE_2011	SA4_CODE11	Character(3)
4	SA4_NAME_2011	SA4_NAME11	Character(50)
5	GCCSA_CODE_2011	GCC_CODE11	Character(5)
6	GCCSA_NAME_2011	GCC_NAME11	Character(50)
7	STATE_CODE_2011	STE_CODE11	Character(1)
8	STATE_NAME_2011	STE_NAME11	Character(50)
9	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: Statistical Area Level 4 (SA4)

File Name (s): SA4_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	SA4_CODE_2011	SA4_CODE11	Character(3)
2	SA4_NAME_2011	SA4_NAME11	Character(50)
3	GCCSA_CODE_2011	GCC_CODE11	Character(5)
4	GCCSA_NAME_2011	GCC_NAME11	Character(50)
5	STATE_CODE_2011	STE_CODE11	Character(1)
6	STATE_NAME_2011	STE_NAME11	Character(50)
7	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: Greater Capital City Statistical Area (GCCSA)

File Name (s): GCCSA_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	GCCSA_CODE_2011	GCC_CODE11	Character(5)
2	GCCSA_NAME_2011	GCC_NAME11	Character(50)
3	STATE_CODE_2011	STE_CODE11	Character(1)
4	STATE_NAME_2011	STE_NAME11	Character(50)
5	AREA_ALBERS_SQM	ALBERS_SQM	Float

File Type: State (S/T)

File Name (s): STE_2011_AUST

Count	Field (mid/mif)	Field (ESRI shp)	Data Type
1	STATE_CODE_2011	STE_CODE11	Character(1)
2	STATE_NAME_2011	STE_NAME11	Character(50)
3	AREA_ALBERS_SQM	ALBERS_SQM	Float

DATA CURRENCY

Date of Effect: 1 July 2011

DATASET STATUS

Progress: Completed dataset

Maintenance and Update Frequency: No further updates for these boundaries planned. There will be a progressive release of the other regions that make up the ASGS until late 2012 (ASGS Volumes 2, 3, 4 and 5). The ASGS will be revised in 2016.

ACCESS

Stored Data Format:

Digital as separate files for each level of the Main Structure and Greater Capital City Statistical Area of the ASGS 2011.

Available Format:

The digital boundary files are in MapInfo Interchange Format (.MID .MIF) and ESRI Shapefile (.shp) format.

MapInfo Interchange Format can be imported directly into MapInfo and other common Geographic Information Systems (GIS) or desktop mapping packages. The .MID .MIF files are text format and can be edited and manipulated for import to less common GIS and CAD systems.

The .MID .MIF files cannot be used directly with viewing tools such as MapInfo ProViewer.

Access Constraints:

Copyright Commonwealth of Australia administered by the ABS.

Datum:

Geocentric Datum of Australia 1994 (GDA94)

The digital boundary files have the datum specified as 116 (GDA94). Users of MapInfo 6.0 or later are able to load data sets based on GDA94 directly, without transformation. Earlier versions of MapInfo cannot interpret GDA94 correctly and there may be alignment problems between data sets based on this datum and other earlier datums.

Projection:

Geographical (i.e. Latitudes and Longitudes)

Geographic Extent:

Geographic Australia.

DATA QUALITY

Lineage:

Mesh Block boundaries were created using various sources including the PSMA digital topographic datasets and ABS SLA boundaries, zoning information from state planning agencies and imagery.

Positional Accuracy:

Positional accuracy is an assessment of the closeness of the location of the spatial objects in relation to their true positions on the earth's surface.

The positional accuracy includes:

- a horizontal accuracy assessment
- a vertical accuracy assessment

Positional accuracy for ABS boundaries is dependent on the accuracy of the features they have been aligned to. ABS boundaries are aligned to a number of layers supplied by PSMA with an accuracy of +/-50 mm. PSMA layers and their positional accuracy are as follows:

- Transport and Topography
  +/- 2 meters in urban areas and +/- 10 meters in rural and remote areas
- CadLite
  +/- 2 meters in urban areas and +/- 10 meters in rural and remote areas
- Administrative Boundaries
  Derived from the cadastre data from each Australian State and Territory jurisdiction.
- Greenspace and Hydrology
  90% of well-defined features are within 1mm (at plot scale) of their true position, eg 1:500 equates to +/- 0.5metre and 1:25,000 equates to +/- 25 metres. Relative spatial accuracy of these themes reflects that of the jurisdictional source data. The accuracy is +/- 2 metres in urban areas and +/- 10 metres in rural and remote areas. No "shift" of data as a means of "cartographic enhancement" to facilitate presentation has been employed for any real world feature.

Attribute Accuracy:

All codes and labels for all levels within the ASGS Main Structure and Greater Capital City Statistical Areas are fully validated.

Logical Consistency:

Spatial units are closed polygons. Attribute records without spatial objects have been included in the data for administrative purposes.

Completeness:

All levels of the Main Structure and Greater Capital City Statistical Areas within the 2011 ASGS are represented.

CONTACT INFORMATION

Contact Organisation: Australian Bureau of Statistics

Contact: ABS Geography

Contact information:

e-mail: geography@abs.gov.au

Information About CSV Files

INFORMATION ABOUT CSV FILES

The product **Australian Statistical Geography Standard (ASGS) Volume 1 - Main Structure and Greater Capital City Statistical Areas** (cat no. 1270.0.55.001) contains comma-separated value (.csv) files. These files list the codes, labels and hierarchies for all the regions within the Main Structure and Greater Capital City Statistical Areas.

There are fifteen .csv files listing the geographical hierarchies for each of the following regions:

- Mesh Blocks (MB)
- Statistical Area Level 1 (SA1)
- Statistical Area Level 2 (SA2)
- Statistical Area Level 3 (SA3)
- Statistical Area Level 4 (SA4)
- Greater Capital City Statistical Areas (GCCSA)
- State and Territory (S/T).

The hierarchy is listed from the lowest level of the ASGS up.

The MB .csv files are broken up by State/Territory whereas all other files are for the whole of Australia.

FILE CONTENTS:

For example MB_2011_NSW.csv contains all MBs within NSW and includes the following fields:

- MB_CODE_2011
- MB_CATEGORY_2011
- SA1_MAINCODE_2011
- SA1_7DIGITCODE_2011
- SA2_MAINCODE_2011
- SA2_5DIGITCODE_2011
- SA2_NAME_2011
- SA3_CODE_2011
- SA3_NAME_2011
- SA4_CODE_2011
- SA4_NAME_2011
- GCCSA_CODE_2011

- GCCSA_NAME_2011
  - STATE_CODE_2011
  - STATE_NAME_2011
  - AREA_ALBERS_SQM

This lists the MBs that make up the SA1s, SA2s, SA3s, SA4s, GCCSAs and State. It also gives the area in square metres of the MB, based on Albers Conic Equal Area projection.

Information About ASGS Maps

INFORMATION ABOUT ASGS MAPS

The product **Australian Statistical Geography Standard (ASGS) Volume 1 - Main Structure and Greater Capital City Statistical Areas** (cat no. 1270.0.55.001) contains Adobe PDF format maps for some of the regions within the Main Structure and for Greater Capital City Statistical Areas (GCCSA).

The maps for the Main Structure are broken up by State/Territory and are presented hierarchically with overall State/Territory maps containing the Statistical Area Level 4 (SA4) boundaries, individual SA4 maps containing the Statistical Area Level 3 (SA3) boundaries and finally individual SA3 maps containing the Statistical Area Level 2 (SA2) boundaries. The individual SA3 maps contain basic information such as major roads and town points for orientation.

Due to the geographic locations of the Other Territories a meaningful overall map containing the SA4 of '901 Other Territories' is not possible. However, individual maps of the SA4 / SA3, and the SA3 with the SA2s are available for the Other Territories.

The GCCSA maps show the 2011 GCCSAs and associated SA4s for all the State and Territory Capitals. There are no GCCSA maps for Other Territories.

Any enquires regarding the ASGS can be made by contacting Geography Section by emailing geography@abs.gov.au

Glossary

GLOSSARY

ABS

Australian Bureau of Statistics

ACT

Australian Capital Territory

Aust.

Australia

ASGC

Australian Standard Geographical Classification

ASGS

Australian Statistical Geography Standard

CCD

Census Collection District

GCCSA

Greater Capital City Statistical Area

LGA

Local Government Area

MB

Mesh Blocks

NSW

New South Wales

NT

Northern Territory

OT

Other Territories

Qld

Queensland

SA

South Australia

SA1

Statistical Area Level 1

SA2

Statistical Area Level 2

SA3

Statistical Area Level 3

SA4

Statistical Area Level 4

SLA

Statistical Local Area

S/T

State or Territory

Tas.

Tasmania

Vic.

Victoria

WA

Western Australia

Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas (Appendix)

APPENDIX EFFECTIVE DATES OF ASGC EDITIONS AND THE ASGS

ASGC Editions

ASGC Edition	Effective Date
1	5 July 1984
2	29 July 1984
3	1 January 1986
4	1 July 1986
5	1 January 1988
6	1 July 1988
7	1 January 1989
8	1 July 1989
9	1 July 1990
2.1	1 January 1991
2.2	1 July 1992
2.3	1 July 1993
2.4	1 July 1994

2.5	1 July 1995
1996	1 July 1996
1998	1 July 1998
1999	1 July 1999
2000	1 July 2000
2001	1 July 2001
2002	1 July 2002
2003	1 July 2003
2004	1 July 2004
2005	1 July 2005
2006	1 July 2006
2007	1 July 2007
2008	1 July 2008
2009	1 July 2009
2010	1 July 2010
2011	1 July 2011

ASGS Edition

ASGS Edition	Effective Date
2011	1 July 2011

Data Cubes (I-Note) - Data Cubes

There is a slight difference between the ASGS definition of some non-spatial records and the non-spatial records used for the distribution of 2011 Census data. The difference in name is minor and only affects these non-spatial records.

In the ASGS there is an SA3 and SA4 for each State/Territory labelled 'Special Purpose Codes'; these records are found in all .csv files and digital boundary files (apart from Greater Capital Cities and State). These records are labelled as 'No usual address' in the Census.

The 'No usual address' SA3/SA4 is only used for the output of Census data and does not relate to any of the spatial records in the ASGS.

The differences are outlined as follows:

Differences in non-spatial record names (codes remain the same)

Non-spatial record code	ASGS - Non-spatial record name	Census - Non-spatial record name
SA3 code *9999 (where * = State/ Territory code)	Special Purpose Codes SA3	No usual address (STE) (where STE = State/ Territory)
SA4 code *99 (where * = State / Territory code)	Special Purpose Codes SA4	No usual address (STE) (where STE = State/ Territory)

Publication (I-Note) - Publication

Addition of GCCSA pdf maps to the ASGS Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011.